

## **Abstract**

The present invention is related to a method and apparatus for a mobile unit to synchronize with the base station in WCDMA system. First, the mobile unit receives the signal transmitted from the base station. The signal includes a primary synchronization channel, a secondary synchronization channel and a common pilot channel. Then, the mobile unit obtains a sample signal and selects a part of the sample signal to be a first period signal and a second period signal. The mobile unit further synchronizes with the base station according to the first period signal, primary synchronization channel, second period signal, secondary synchronization channel and the common pilot channel.